



THE ULTIMATE RIDE

# TiLite™ X

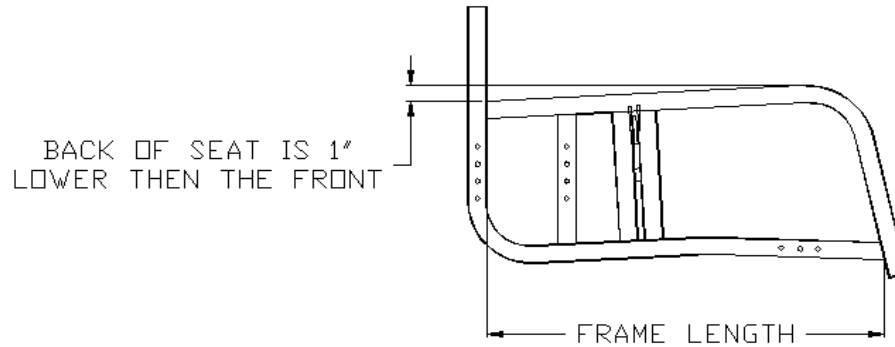
## Technical Manual

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DC100581 REV A 03/20/00

# TISPORT X CHAIR SIDE FRAME LENGTH

USE THIS CHART TO DETERMINE THE SIDE FRAME LENGTH THAT YOU WANT TO ORDER  
DIMENSION SHOWN ARE IN INCHES



TO USE THIS CHART: CHOOSE THE SEAT DEPTH THAT YOU NEED, AND THE FRAME LENGTH YOU DESIRE, TAKING NOTE OF THE FRONT FRAME ANGLE. THE DIMENSIONS UNDER EACH FRONT FRAME ANGLE SHOW THE LENGTH OF THE SIDE FRAME. THE ITEMS SHOWN IN THE SHADED BOXES ARE FOR THE STANDARD FRAME OPTIONS. THE NON SHADED BOXES ARE OTHER NO CHARGE OPTIONS

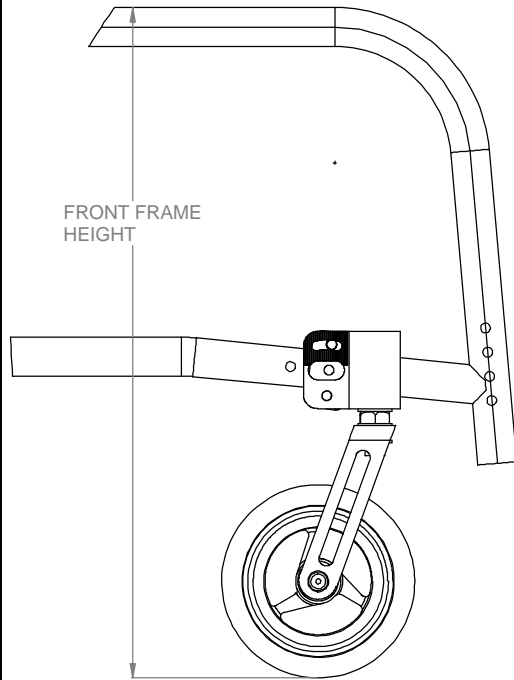
SEAT DEPTHS	Short Front Frame Angle			Medium Front Frame Angle			Long Front Frame Angle		
	70° Short	80° Short	85° Short	70° Medium	80° Medium	85° Medium	70° Long	80° Long	85° Long
	FRAME LENGTH			FRAME LENGTH			FRAME LENGTH		
12"	21 1/2	20 1/8	19 1/2	NA	NA	NA	NA	NA	NA
13"	21 1/2	20 1/8	19 1/2	NA	NA	NA	NA	NA	NA
14"	21 1/2	20 1/8	19 1/2	23 1/2	22 1/8	21 1/2	NA	NA	NA
15"	21 1/2	20 1/8	19 1/2	23 1/2	22 1/8	21 1/2	25 1/2	24 1/8	23 1/2
16"	21 1/2	20 1/8	19 1/2	23 1/2	22 1/8	21 1/2	25 1/2	24 1/8	23 1/2
17"	NA	NA	NA	23 1/2	22 1/8	21 1/2	25 1/2	24 1/8	23 1/2
18"	NA	NA	NA	23 1/2	22 1/8	21 1/2	25 1/2	24 1/8	23 1/2

# TISPORT X CASTER HEIGHT MATRIX

USE THIS CHART TO HELP DETERMINE DIMENSION "C" FRONT SEAT HEIGHT ON THE X CHAIR ORDER FORM  
DIMENSIONS SHOWN ARE IN INCHES

TO USE THIS CHART: SELECT THE TYPE OF CASTER WHEEL THAT YOU ARE GOING TO USE AND THEN GO DOWN THE ROW UNTIL YOU FIND A HEIGHT THAT IS AS CLOSE AS POSSIBLE TO THE REQUESTED HEIGHT THAT YOU NEED. TOLERANCE +/- 1/4"

Fork Style	3" caster	4" caster	5" caster	6" caster	8" poly	8" pneumatic	Notes:
3" fork standard	14 3/16	14 11/16	<del>15 1/8</del>	<del>15 5/8</del>	<del>17 1/8</del>	<del>17 5/8</del>	Caster pin locks optional
5"-6" fork standard	15 15/16	16 7/16	16 15/16	17 7/16	<del>18 1/8</del>	<del>18 5/8</del>	Caster pin locks optional
5"-6" fork w/1/2" ext	16 3/8	16 7/8	17 3/8	17 7/8	<del>18 1/4</del>	<del>18 9/8</del>	
5"-6" fork w/1" ext	16 7/8	17 3/8	17 7/8	18 3/8	<del>18 7/4</del>	<del>19 1/8</del>	
5"-6" fork w/1-1/2" ext	17 3/8	17 7/8	18 3/8	18 7/8	<del>19 1/4</del>	<del>19 5/8</del>	
7"-8" fork standard top hole	<del>14 3/16</del>	<del>14 11/16</del>	16 15/16	17 7/16	<del>18 1/8</del>	<del>18 5/8</del>	Caster pin locks optional
7"-8" fork w/1/2" ext top hole	<del>15 15/16</del>	<del>16 7/16</del>	17 3/8	17 7/8	<del>18 1/4</del>	<del>18 9/8</del>	
7"-8" fork w/1" ext top hole	<del>16 3/8</del>	<del>16 7/8</del>	17 7/8	18 3/8	<del>18 7/4</del>	<del>19 1/8</del>	
7"-8" fork w/1-1/2" ext top hole	<del>17 3/8</del>	<del>17 7/8</del>	18 3/8	18 7/8	<del>19 1/4</del>	<del>19 5/8</del>	
7"-8" fork standard bottom hole	16 15/16	17 7/16	17 15/16	18 7/16	19 1/4	19 7/16	Caster pin locks optional
7"-8" fork w/1/2" ext bottom	17 3/8	17 7/8	18 3/8	18 7/8	19 11/16	19 7/8	
7"-8" fork w/1" ext bottom hole	17 7/8	18 3/8	18 7/8	19 3/8	20 3/16	20 3/8	
7"-8" fork w/1-1/2" ext bottom hole	18 3/8	18 7/8	19 3/8	19 7/8	20 11/16	20 7/8	
Frog Legs 3", 4", 5" Std top hole	15 15/16	16 7/16	<del>16 15/16</del>	<del>17 7/16</del>	<del>18 1/8</del>	<del>18 5/8</del>	Only to be used if Frog Legs were ordered
Frog Legs 3", 4", 5" Std bottom hole	16 7/16	16 15/16	17 7/16	<del>17 15/16</del>	<del>18 7/16</del>	<del>19 1/4</del>	Only to be used if Frog Legs were ordered
Frog Legs 3", 4", 5" w/1/2" ext top hole	16 3/8	16 7/8	<del>17 3/8</del>	<del>17 7/8</del>	<del>18 1/4</del>	<del>18 9/8</del>	Only to be used if Frog Legs were ordered
Frog Legs 3", 4", 5" w/1/2" ext bottom hole	16 7/8	17 3/8	17 7/8	<del>18 3/8</del>	<del>18 7/8</del>	<del>19 1/4</del>	Only to be used if Frog Legs were ordered
Frog Legs 3", 4", 5" w/1" ext top hole	16 7/8	17 3/8	<del>17 7/8</del>	<del>18 3/8</del>	<del>18 7/8</del>	<del>19 1/4</del>	Only to be used if Frog Legs were ordered
Frog Legs 3", 4", 5" w/1" ext bottom hole	17 3/8	17 7/8	18 3/8	<del>18 7/8</del>	<del>19 1/4</del>	<del>19 5/8</del>	Only to be used if Frog Legs were ordered
Frog Legs 3", 4", 5" w/1-1/2" ext top hole	17 3/8	17 7/8	<del>18 3/8</del>	<del>18 7/8</del>	<del>19 1/4</del>	<del>19 5/8</del>	Only to be used if Frog Legs were ordered
Frog Legs 3", 4", 5" w/1-1/2" ext bottom hole	17 7/8	18 3/8	18 7/8	<del>19 3/8</del>	<del>19 7/8</del>	<del>20 3/8</del>	Only to be used if Frog Legs were ordered



## TISPORT X CASTER HEIGHT MATRIX

USE THIS CHART TO HELP DETERMINE DIMENSION "C" FRONT SEAT HEIGHT ON THE X CHAIR ORDER FORM  
DIMENSIONS SHOWN ARE IN INCHES

**TO USE THIS CHART: SELECT THE TYPE OF CASTER WHEEL THAT YOU ARE GOING TO USE AND THEN GO DOWN THE ROW UNTIL YOU FIND A HEIGHT THAT IS AS CLOSE AS POSSIBLE TO THE REQUESTED HEIGHT THAT YOU NEED. TOLERANCE +- 1/4"**

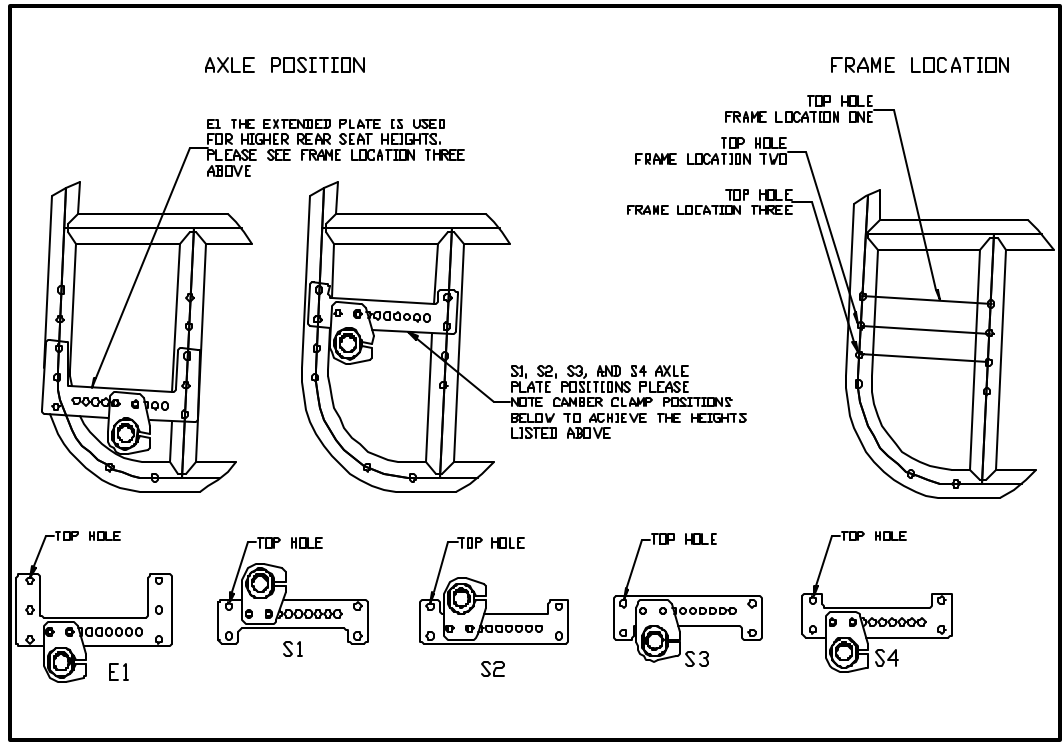
Fork Style	3" caster	4" caster	5" caster	6" caster	8" poly	8" pneumatic	Notes:
6" Frog Legs 4" Std top hole	<del>16 3/16</del>	16 3/16	<del>17 3/16</del>	<del>18 3/16</del>	<del>19 3/16</del>	<del>20 3/16</del>	Only to be used if Frog Legs were ordered
6" Frog Legs 3", 4", 5" Std middle hole	16 3/16	16 11/16	17 3/16	<del>18 3/16</del>	<del>19 3/16</del>	<del>20 3/16</del>	Only to be used if Frog Legs were ordered
6" Frog Legs 3", 4", 5", 6" Std bottom hole	16 11/16	17 3/16	17 11/16	18 3/16	<del>19 3/16</del>	<del>20 3/16</del>	Only to be used if Frog Legs were ordered
6" Frog Legs 4" w/1/2" ext top hole	<del>16 11/16</del>	16 11/16	<del>17 3/16</del>	<del>18 3/16</del>	<del>19 3/16</del>	<del>20 3/16</del>	Only to be used if Frog Legs were ordered
6" Frog Legs 3", 4", 5" w/1/2" ext middle hole	16 11/16	17 3/16	17 11/16	<del>18 3/16</del>	<del>19 3/16</del>	<del>20 3/16</del>	Only to be used if Frog Legs were ordered
6" Frog Legs 3", 4", 5", 6" w/1/2" ext bottom hole	17 3/16	17 11/16	18 3/16	18 11/16	<del>19 3/16</del>	<del>20 3/16</del>	Only to be used if Frog Legs were ordered
6" Frog Legs 4" w/1" ext top hole	<del>17 3/16</del>	17 3/16	<del>18 3/16</del>	<del>19 3/16</del>	<del>20 3/16</del>	<del>21 3/16</del>	Only to be used if Frog Legs were ordered
6" Frog Legs 3", 4", 5" w/1" ext middle hole	17 3/16	17 11/16	18 3/16	<del>19 3/16</del>	<del>20 3/16</del>	<del>21 3/16</del>	Only to be used if Frog Legs were ordered
6" Frog Legs 3", 4", 5", 6" w/1" ext bottom hole	17 11/16	18 3/16	18 11/16	19 3/16	<del>20 3/16</del>	<del>21 3/16</del>	Only to be used if Frog Legs were ordered
6" Frog Legs 4" w/1-1/2" ext top hole	<del>17 11/16</del>	17 11/16	<del>18 3/16</del>	<del>19 3/16</del>	<del>20 3/16</del>	<del>21 3/16</del>	Only to be used if Frog Legs were ordered
6" Frog Legs 3", 4", 5" w/1-1/2" ext middle hole	17 11/16	18 3/16	18 11/16	<del>19 3/16</del>	<del>20 3/16</del>	<del>21 3/16</del>	Only to be used if Frog Legs were ordered
6" Frog Legs 3", 4", 5", 6" w/1-1/2" ext bottom hole	18 3/16	18 11/16	19 3/16	19 11/16	<del>20 3/16</del>	<del>21 3/16</del>	Only to be used if Frog Legs were ordered

# TISPORT X REAR SEAT HEIGHT MATRIX FOR X CHAIR

USE THIS CHART TO HELP ACHIEVE DIMENSION D (REAR SEAT HEIGHT) ON THE ORDER FORM  
DIMENSIONS SHOWN ARE IN INCHES

TO USE THIS CHART: PICK THE TYPE OF TIRE THAT YOU ARE GOING TO USE FOR THE REAR WHEEL AND THEN GO ACROSS THE ROW UNTIL YOU FIND A HEIGHT THAT IS AS CLOSE AS POSSIBLE TO THE REQUESTED HEIGHT THAT YOU NEED. ONCE YOU HAVE FOUND IT THEN NOTE THE FRAME LOCATION AND AXLE SELECTION. REFER TO THE DIAGRAM BELOW ON HOW TO POSITION THE CAMBER PLUG AND LOCATE THE HOLE POSITION TO ACHIEVE THE DESIRED REAR FRAME HEIGHT. TOLERANCE +/- 1/4"

TIRES	FRAME LOCATION ONE				FRAME LOCATION TWO				FRAME LOCATION THREE				
	AXLE S1	AXLE S2	AXLE S3	AXLE S4	AXLE S1	AXLE S2	AXLE S3	AXLE S4	AXLE S1	AXLE S2	AXLE S3	AXLE S4	AXLE E1
22 PYRAMID	12 1/4	12 3/4	14 1/4	14 3/4	13 1/4	13 3/4	15 1/4	15 3/4	14 1/4	14 3/4	16 1/4	16 3/4	17 3/4
22 PRIMO	12 5/8	13 1/8	14 5/8	15 1/8	13 5/8	14 1/8	15 5/8	16 1/8	14 5/8	15 1/8	16 5/8	17 1/8	18 1/8
22 TREADED	13 1/8	13 5/8	15 1/8	15 5/8	14 1/8	14 5/8	16 1/8	16 5/8	15 1/8	15 5/8	17 1/8	17 5/8	18 5/8
24 MAKO	13 3/8	13 7/8	15 3/8	15 7/8	14 3/8	14 7/8	16 3/8	16 7/8	15 3/8	15 7/8	17 3/8	17 7/8	18 7/8
24 PRIMO	13 3/8	13 7/8	15 3/8	15 7/8	14 3/8	14 7/8	16 3/8	16 7/8	15 3/8	15 7/8	17 3/8	17 7/8	18 7/8
24 TREADED	13 5/8	14 1/8	15 5/8	16 1/8	14 5/8	15 1/8	16 5/8	17 1/8	15 5/8	16 1/8	17 5/8	18 1/8	19 1/8
25 PRIMO	13 7/8	14 3/8	15 7/8	16 3/8	14 7/8	15 3/8	16 7/8	17 3/8	15 7/8	16 3/8	17 7/8	18 3/8	19 3/8
25 MAKO	13 5/8	14 1/8	15 5/8	16 1/8	14 5/8	15 1/8	16 5/8	17 1/8	15 5/8	16 1/8	17 5/8	18 1/8	19 1/8
26 PRIMO	14 3/8	14 7/8	16 3/8	16 7/8	15 3/8	15 7/8	17 3/8	17 7/8	16 3/8	16 7/8	18 3/8	18 7/8	19 7/8
26 TREADED	14 5/8	15 1/8	16 5/8	17 1/8	15 5/8	16 1/8	17 5/8	18 1/8	16 5/8	17 1/8	18 5/8	19 1/8	20 1/8



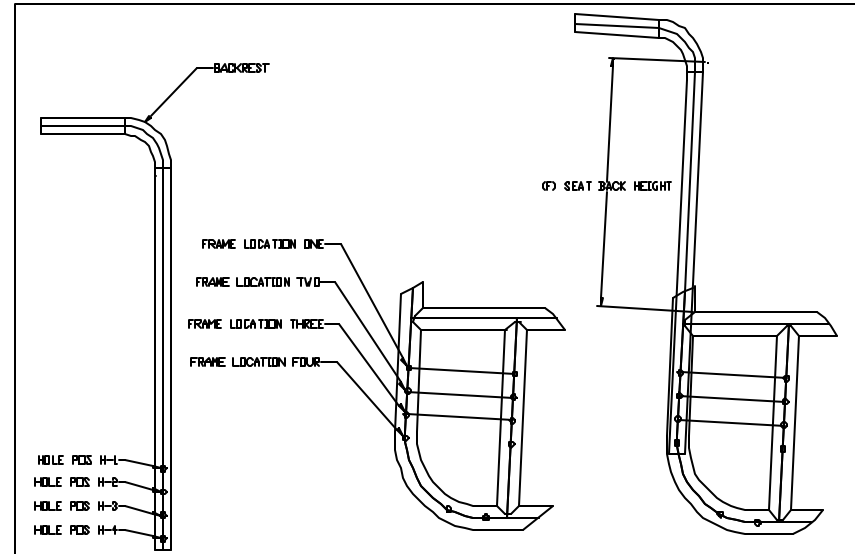
# TISPORT X SEAT BACK HEIGHT MATRIX

USE THIS CHART TO DETERMINE THE DIMENSION FOR ITEM F (SEAT BACK HEIGHT) ON THE X CHAIR ORDER FORM  
DIMENSIONS SHOWN ARE IN INCHES

To use this chart: Choose the height desired below for your Seat Back Height

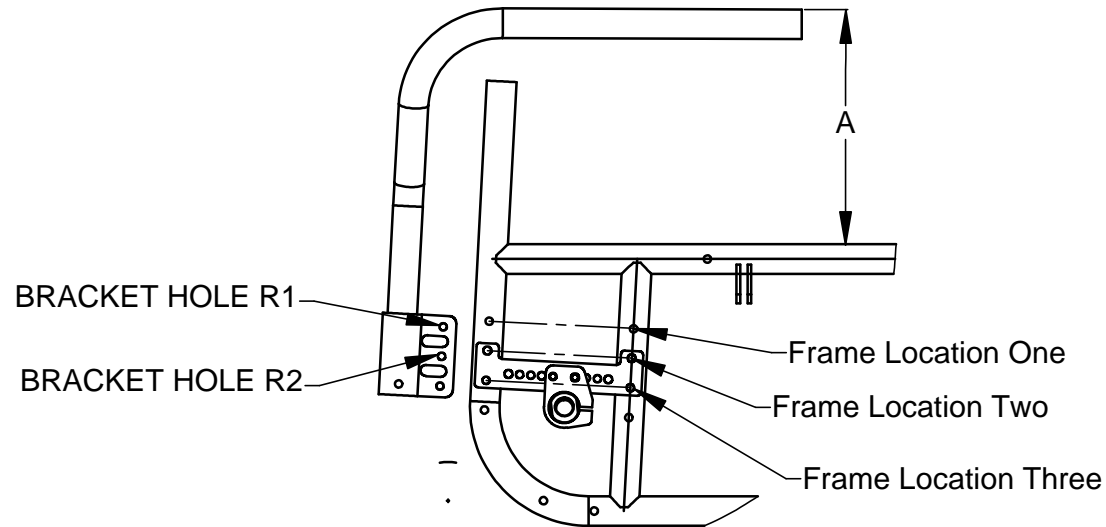
To set your back height, match the hole position shown for the backrest with the Frame Location number to attain the height you need.

		Hole Pos H-1	Hole Pos H-2	Hole Pos H-3	Hole Pos H-4
Backrest 11"-14"	Frame location one	11	12	13	14
	Frame location two	[Dashed line]		11	13
	Frame location three	[Dashed line]		11	12
	Frame location four	[Dashed line]			11
Backrest 15"-18"	Frame location one	15	16	17	18
	Frame location two	[Dashed line]		15	17
	Frame location three	[Dashed line]		15	16
	Frame location four	[Dashed line]			15



# TISPORT X SWING AWAY TUBULAR ARMREST HEIGHT MATRIX

USE THIS CHART TO ACHIEVE THE DESIRED ARMSREST HEIGHTS  
DIMENSIONS SHOWN ARE IN INCHES



To use this chart: Select the desired armrest height from the chart below. Screw the armrest bracket into the proper frame location taking note of the correct bracket hole.

Armrest Height	Frame Location One	Frame Location Two	Frame Location
BRACKET HOLE R1	9.00	8.00	7.00
BRACKET HOLE R2	10.00	<del>8.00</del>	<del>7.00</del>

## X CHAIR SEAT TO FOOTREST CHART

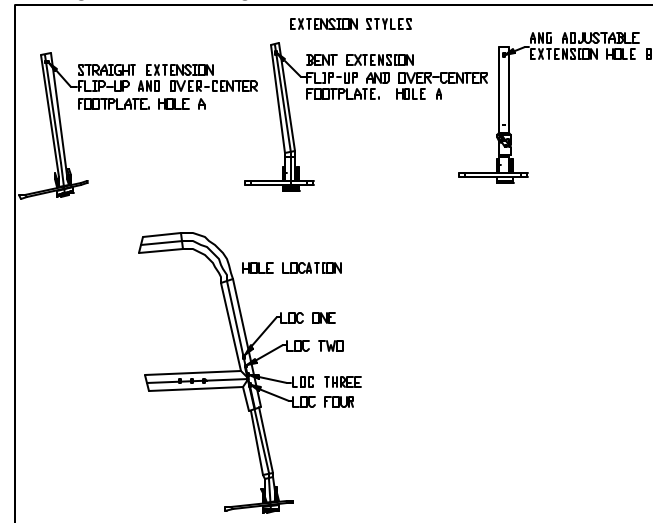
USE THIS CHART TO HELP DETERMINE DIMENSION E (SEAT TO FOOTREST HEIGHT) ON THE ORDER FORM  
DIMENSIONS SHOWN ARE IN INCHES

To use this chart: Choose the chart for the extension style you want first (Straight, Bent or Angle Adjustable). Then you will need to pick the chart that corresponds with the front angle of your frame. To achieve the seat to footrest length you desire, match the extension hole (either A or B) with the hole location (1,2,3 or 4).

The part numbers shown below are for the particular style of footrest extension

Straight & Bent Extension				Angle Adjustable Extension			
<b>70 Degree Front</b>	SHORT EXTENSION HOLE A	MEDIUM EXTENSION HOLE A	LARGE EXTENSION HOLE A	SHORT EXTENSION HOLE B	MEDIUM EXTENSION HOLE B	LARGE EXTENSION HOLE B	
	Loc One	16 1/4	18	20 1/8	17	17 7/8	19 3/4
	Loc Two	17	18 5/8	20 5/8	17 1/2	18 1/2	20 3/8
	Loc Three	17 1/2	19 1/4	21 3/8	18 1/8	19 1/8	21
	Loc Four	18 1/8	20	22	18 7/8	19 5/8	21 5/8
<b>80 Degree Front</b>	SHORT EXTENSION HOLE A	MEDIUM EXTENSION HOLE A	LARGE EXTENSION HOLE A	SHORT EXTENSION HOLE B	MEDIUM EXTENSION HOLE B	LARGE EXTENSION HOLE B	
	Loc One	15	16 3/4	18 3/4	15 5/8	16 5/8	18 5/8
	Loc Two	15 5/8	17 3/8	19 1/2	16 1/8	17 1/4	19 1/8
	Loc Three	16 1/4	18	20 1/8	16 3/4	17 7/8	19 7/8
	Loc Four	17	18 3/4	20 3/4	17 3/8	18 1/2	20 3/8
<b>85 Degree Front *</b>	SHORT EXTENSION HOLE A	MEDIUM EXTENSION HOLE A	LARGE EXTENSION HOLE A	SHORT EXTENSION HOLE B	MEDIUM EXTENSION HOLE B	LARGE EXTENSION HOLE B	
	Loc One	14 1/2	16 3/8	18 3/8	15 1/4	16 1/8	18 1/8
	Loc Two	15 1/2	17	19	15 3/4	16 3/4	18 3/4
	Loc Three	15 3/4	17 5/8	19 5/8	16 3/8	17 3/8	19 3/8
	Loc Four	16 1/2	18 1/4	20 3/8	17	18 1/8	20

\* Please note that with an 85 degree front end a straight footrest tube should be used.  
The Seat To Footrest length that you can get on an Angle Adjustable Footrest can vary according to that amount of angle that the footrest is set to.



## X FOLDING CHAIR FOOTPLATE AND HEEL LOOP CHART

(USE THIS CHART TO DETERMINE THE FOOTPLATE SIZE PER CHAIR WIDTH. THIS WILL NEED TO BE CHANGED PER A CHAIR WIDTH CHANGE)  
DIMENSIONS SHOWN ARE IN INCHES

On the charts below, the part numbers for the particular parts you need are listed. To choose the footplate you will need, look on the chart and find the Seat Width for the type of footplate style you need to use. Look under the Seat Width column that matches your front frame offset measurement to know which footplate will work for you.

OVER-CENTER FOOTPLATE				
LH FOOTPLATE PART #	RH FOOTPLATE PART #	FOOTPLATE WIDTH	SEAT WIDTH 0" OFFSET	SEAT WIDTH 1" OFFSET
CP100567	CP100562	3.814		12"
CP100576	CP100572	4.314	11"	13"
CP100568	CP100563	4.814	12"	14"
CP100577	CP100573	5.314	13"	15"
CP100569	CP100564	5.814	14"	16"
CP100578	CP100574	6.314	15"	17"
CP100570	CP100565	6.814	16"	18"
CP100579	CP100575	7.314	17"	19"
CP100571	CP100566	7.814	18"	20"

FLIP-UP FOOTPLATE				
LH FOOTPLATE PART #	RH FOOTPLATE PART #	FOOTPLATE WIDTH	CHAIR WIDTH 0" OFFSET	CHAIR WIDTH 1" OFFSET
CP100524	CP100555	4.203	12" - 13"	14 - 15"
CP100525	CP100556	5.203	14" - 15"	16" - 17"
CP100526	CP100557	6.203	16" - 17"	18" - 19"
CP100527	CP100558	7.203	18"	

HEEL LOOP*			
STRAP PART #	STRAP LENGTH	CHAIR WIDTH 0" OFFSET	CHAIR WIDTH 1" OFFSET
CP100551	8.50	12"-13"	14"-15"
CP100552	9.50	14"-15"	16"-17"
CP100553	10.50	16"-17"	18"-19"
CP100902	11.50	18"	

\*Please note that Heel Loops are not available for the over-center footplate style.

# MISCELLANEOUS INFORMATION

## **Desk Arm Heights**

9"-12"

12"-15"

7/07/2000 REV: A